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# THE UNITED STATES OF AMERICA

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*February 24, 2005*

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**APPLICATION NUMBER: 60/542,779**

**FILING DATE: February 06, 2004**

**RELATED PCT APPLICATION NUMBER: PCT/US05/03623**



Certified by

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020604

# **PROVISIONAL APPLICATION FOR PATENT COVER SHEET**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

INVENTOR(S)					
Given Name (first and middle (if any))		Family Name or Surname		Residence (City and either State or Foreign Country)	
D. Glenn Purcell		Purcell		Edwardsburg, Michigan	
<input type="checkbox"/> Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (280 characters max)					
DAMPENING AND RETRACTION MECHANISM FOR A LANCING DEVICE					
Direct all correspondence to: CORRESPONDENCE ADDRESS					
<input type="checkbox"/> Customer Number		<input type="text"/>		<div style="border: 1px solid black; padding: 5px; text-align: center;">           Place Customer Number Bar Code Label here         </div>	
OR Type Customer Number here					
<input checked="" type="checkbox"/> Firm or Individual Name		Elizabeth A. Levy, Esq.			
Address		Bayer Healthcare LLC			
Address		P. O. Box 40			
City		Elkhart		State	Indiana
Country		USA		ZIP	46515-0040
		Telephone	574/264-8394	Fax	574/262-7564
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages		3		<input type="checkbox"/> Small Entity Statement	
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets		1		<input type="checkbox"/> Other (specify) <input type="text"/>	
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)					
<input type="checkbox"/> A check or money order is enclosed to cover the filing fees				FILING FEE AMOUNT (\$)	
<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number:				<input type="text"/> 13-3375	
				<div style="border: 1px solid black; padding: 5px; text-align: center;">         \$160.00       </div>	
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

Respectfully submitted,

SIGNATURE Elizabeth A. Levy  
TYPED or PRINTED NAME Elizabeth A. Levy  
TELEPHONE 574/264-8394

Date 02/05/04

REGISTRATION NO. 34,375  
(if appropriate)  
Docket Number: MSE #2695

## **USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT**

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C., 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C., 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
PROVISIONAL APPLICATION FOR U.S. LETTERS PATENT FOR:

Invention of: D. Glenn Purcell

Entitled: DAMPENING AND RETRACTION MECHANISM  
FOR A LANCING DEVICE

Docket No.: MSE #2695

CERTIFICATE OF MAILING BY 'EXPRESS MAIL'

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I hereby certify that this paper or fee is being deposited with the United States Postal Service 'EXPRESS MAIL POST OFFICE TO ADDRESSEE' Service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop-PROVISIONAL APPLICATION, Hon. Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450

Gayle Gestick

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(Signature of Person Mailing Paper or Fee)

2/6/04

(Date of Signature)

## MEMO OF INVENTION

**A. Brief descriptive title.**

Dampening and Retraction Mechanism for a Lancing Device

**B. Project No.** 215013\_\_\_\_; **Project Name** Minimal Invasive\_\_\_\_\_.

**C. This invention relates to (1) a machine (tool, article, device, apparatus, etc.), (2) a process (production, fabrication, use, treatment, etc.) (3) composition of matter (compound, formulation, etc.), (4) new use of known machine, process or composition, and/or (5) improvement. (Circle as many as seem applicable.)**

Device

**D. State the anticipated commercial application of the invention.**

The dampening and retraction mechanism that could be incorporated into our existing Microlet device. It could also be implemented into a new lancing device to improve reliability and performance and/or be incorporate into a blood glucose instrument with an integrated lancing device.

**E. State precisely what your invention is. Indicate what problem was solved and how you solved it. (Attach extra pages if needed.)**

A dampening and retraction mechanism, which could be incorporated into the existing Microlet that would retract the needle from the puncture site and eliminate multiple punctures, caused by oscillation of the lancet drive mechanism. It would also eliminate the attachment of the drive spring to the lancet holder, simplifying the assembly and helping reduce spring oscillation, which is currently transferred directly to the lancet. The current design relies upon part interference to dampen the lancet holder and control the amount of lancet oscillation. Due to part and assembly variations, the amount of interference can be excessive or none. Excessive interference can reduce the lancet force and adversely effect the puncture depth, causing insufficient sample size and the need to lance again. No interference would result in lancet oscillation, resulting in multiple punctures believed to increase pain. The purposed mechanism incorporates a counter spring force, placed opposite the drive spring, to retract the lancet and control the oscillation of the lancet drive mechanism.

**F. Indicate whether a literature and/or patent search has been performed, and if so, the nature and extent of such search..**  
no

Whether or not a search has been performed, list the references, patents, existing products, etc. which you believe to be most relevant to the invention.

**G. State how your invention differs from the items listed in F. List the advantages which your invention has over same. (Attach extra pages if needed.)**

- H. Briefly describe how your machine operates, your process is carried out or your product is made and used. (Attach extra pages if needed.)**

The device consists of a retraction and rebound spring mechanism which applies a force opposed to the lancet drive mechanism. The retraction and rebound spring is placed between the end of the lancet holder, end opposite the lancet, and against the opposite side of the supporting wall of the lancet drive mechanism spring. The retraction and rebound spring applying the opposing force is compressed as the drive mechanism is released, firing the lancet against a stop. At the time the lancet hits the stop, the retraction and rebound spring starts to expand and retracts the lancet from the finger and restricts the distance of the rebound, which will eliminate a second lancet puncture to the finger.

- I. Date you first thought of the invention?**

Identify the records you have to substantiate this date, including books, letters, notes, reports, etc.?

CAD files that document the design.

Models built to prove design.

Highspeed videos to prove function of design.

- J. To whom did you first disclose (orally or in writing) this invention?**

On what date and where did you make such disclosure?

What written evidence do you have of this disclosure to others?

- K. When did you first do any actual experimental work toward carrying out the invention? (Identify laboratory notebooks by number and page.)**

Built Model in

When did you first demonstrate the operation of the invention performing its intended function (i.e., a demonstration of utility or a demonstration of pharmacological activity)?

Highspeed videos performed by \_\_\_\_\_ in

- L. Who has observed the progress of your experimental work?**

- M. Identify all individuals who worked on the invention and indicate the nature of each individual's contribution. (Include authors of this MOI)

Name	Contribution
_____	Inventor _____
_____	Built Models _____
_____	Tested Models _____
_____	_____
_____	_____

- N. Identify any Memo of Invention (MOI) or patent application related to this invention.

- O. Has any commercial manufacture, use or product sale begun?

\_\_\_\_\_ yes        X   no      \_\_\_\_\_ If yes, provide details.

When is commercial manufacture, use or any offer for sale anticipated?

- P. Has any information concerning this invention been disclosed outside Miles? (Include oral discussions with third parties, publications, advertising, market research, test marketing, etc.)

No

Is any such outside disclosure anticipated? Explain.

